



January 25, 2012

NRC 2012-0005  
10 CFR 50.73

Regional Administrator, Region III  
U. S. Nuclear Regulatory Commission  
2443 Warrenville Road, Suite 210  
Lisle, IL 60532-4352

Point Beach Nuclear Plant, Units 1  
Dockets 50-266  
Renewed License Nos. DPR-24

Licensee Event Report 266/2011-001-00  
Loss of Offsite Power to Unit 1 Safeguard Buses

Enclosed is Licensee Event Report (LER) 266/2011-001-00 for Point Beach Nuclear Plant (PBNP), Unit 1. Pursuant to 10 CFR 50.73(a)(2)(vi)(A), the event is reportable as an event or condition that resulted in manual or automatic actuation of the emergency diesel generators.

This submittal contains no new or revised regulatory commitments.

If you have questions or require additional information, please contact Mr. James Costedio at 920/755-7427.

Very truly yours,

NextEra Energy Point Beach, LLC

A handwritten signature in black ink, appearing to read "Larry Meyer".

Larry Meyer  
Site Vice President

Enclosure

cc: Administrator, Region III, USNRC  
Project Manager, Point Beach Nuclear Plant, USNRC  
Resident Inspector, Point Beach Nuclear Plant, USNRC  
PSCW

NRC FORM 366 (10-2010)		U.S. NUCLEAR REGULATORY COMMISSION		APPROVED BY OMB: NO. 3150-0104		EXPIRES: 10/31/2013			
<b>LICENSEE EVENT REPORT (LER)</b>				Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA/Privacy Section (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects.resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.					
1. FACILITY NAME Point Beach Nuclear Plant Unit 1				2. DOCKET NUMBER 05000266		3. PAGE 1 of 3			
4. TITLE Loss of Offsite Power to Unit 1 Safeguards Buses									
5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	
11	27	2011	2011	001	00	01	25	2012	
8. OTHER FACILITIES INVOLVED									
FACILITY NAME			DOCKET NUMBER						
NA			NA						
FACILITY NAME			DOCKET NUMBER						
NA			NA						
9. OPERATING MODE			11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: (Check all that apply)						
MODE 5			<input type="checkbox"/> 20.2201(b) <input type="checkbox"/> 20.2203(a)(3)(i) <input type="checkbox"/> 50.73(a)(2)(i)(C) <input type="checkbox"/> 50.73(a)(2)(vii)						
			<input type="checkbox"/> 20.2201(d) <input type="checkbox"/> 20.2203(a)(3)(ii) <input type="checkbox"/> 50.73(a)(2)(ii)(A) <input type="checkbox"/> 50.73(a)(2)(viii)(A)						
10. POWER LEVEL			<input type="checkbox"/> 20.2203(a)(1) <input type="checkbox"/> 20.2203(a)(4) <input type="checkbox"/> 50.73(a)(2)(ii)(B) <input type="checkbox"/> 50.73(a)(2)(viii)(B)						
			<input type="checkbox"/> 20.2203(a)(2)(i) <input type="checkbox"/> 50.36(c)(1)(i)(A) <input type="checkbox"/> 50.73(a)(2)(iii) <input type="checkbox"/> 50.73(a)(2)(ix)(A)						
0%			<input type="checkbox"/> 20.2203(a)(2)(ii) <input type="checkbox"/> 50.36(c)(1)(ii)(A) <input checked="" type="checkbox"/> 50.73(a)(2)(iv)(A) <input type="checkbox"/> 50.73(a)(2)(x)						
			<input type="checkbox"/> 20.2203(a)(2)(iii) <input type="checkbox"/> 50.36(c)(2) <input type="checkbox"/> 50.73(a)(2)(v)(A) <input type="checkbox"/> 73.71(a)(4)						
			<input type="checkbox"/> 20.2203(a)(2)(iv) <input type="checkbox"/> 50.48(a)(3)(ii) <input type="checkbox"/> 50.73(a)(2)(v)(B) <input type="checkbox"/> 73.71(a)(5)						
			<input type="checkbox"/> 20.2203(a)(2)(v) <input type="checkbox"/> 50.73(a)(2)(i)(A) <input type="checkbox"/> 50.73(a)(2)(v)(C) <input type="checkbox"/> OTHER						
			<input type="checkbox"/> 20.2203(a)(2)(vi) <input type="checkbox"/> 50.73(a)(2)(i)(B) <input type="checkbox"/> 50.73(a)(2)(v)(D)						
			Specify in Abstract below or in NRC Form 366A						
12. LICENSEE CONTACT FOR THIS LER									
NAME Kim Locke, Engineering Analyst						TELEPHONE NUMBER (Include Area Code) 920/755-7655			
13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT									
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX
X	FK	BKR	S005	YES					
14. SUPPLEMENTAL REPORT EXPECTED					15. EXPECTED SUBMISSION DATE		MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE)					<input checked="" type="checkbox"/> NO				
ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)									
<p>On 11/27/2011 at 0226 CDT, an undervoltage condition occurred on Unit 1, 1A-05 and 1A-06 safety-related buses during the restoration of 1X-03 high voltage station auxiliary transformer (HVSAT). The four emergency diesels (EDGs) started. The G-01 and G-03 EDGs loaded onto buses 1A-05 and 1A-06. Offsite power remained available to Unit 2 throughout the event via an alternate path.</p> <p>During switchyard realignment of the 1X03 HVSAT, the 1F89-112 circuit switcher failed. This resulted in a low voltage condition which started the standby EDGs. The fault did not cause a lockout of 1X03, the associated switchyard component. As a result, the automatic transfer to the redundant offsite power supply in the switchyard was not initiated, and G01 and G03 automatically loaded onto Unit 1 safety system buses 1A05 and 1A06 once the diesels had reached operating voltage and frequency.</p> <p>The safety significance of this event was low because at the time of the event Unit 1 was in MODE 5, and shutdown cooling capability was maintained via the steam generators. Following the event, station procedures were revised to check local circuit switcher indicators for proper configuration prior to and following operation.</p> <p>This event is being reported pursuant to 10 CFR 50.73(a)(2)(iv)(A), any event or condition that resulted in a manual or automatic actuation of any of the systems listed in 10 CFR 50.73(a)(2)(iv)(B) including any event or condition that results in the actuation of the emergency AC electrical power system.</p>									

**LICENSEE EVENT REPORT (LER)  
CONTINUATION SHEET**

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Point Beach Nuclear Plant, Unit 1	05000266	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	Page 2 of 3
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**NARRATIVE****Description of the Event:**

On 11/27/2011 restoration of the 1X-03 high voltage station auxiliary transformer [XFMR] was in progress. The 13.8kV buses [BU] were connected and powered from the 2X-03 high voltage station auxiliary transformer and were cross-connected. On 11/27/2011 at 0226 CDT, during the restoration process, the H-02 to H-01 bus tie breaker was opened to separate the high voltage station auxiliary transformers. Upon opening the breaker an undervoltage condition occurred on the Unit 1, 4.16kV safeguard buses 1A-05, and 1A-06. As a result of the undervoltage condition, the four emergency diesel generators [DGs] started and the G-01 and G-03 EDGs loaded onto buses 1A-05 and 1A-06, respectively. The 2X-03 high voltage station auxiliary transformer remained energized throughout the event. An Unusual Event (UE) was declared at 0238 CDT based upon the interruption of offsite power to the essential buses. The UE was subsequently terminated at 0700 CDT on 11/27/2011 when offsite power was restored to H02 bus from H01 bus and to the affected Unit 1 buses. Unit 2 maintained offsite power throughout the event.

The diesel start sequence resulted in a separation of the vital buses from off-site power as designed. The EDGs performed as expected, fast starting and loading onto safeguards buses, 1A-05, and 1A-06, respectively. The plant safety systems functioned as expected. A review of plant process computer data confirmed that power to the required residual heat removal pump [P] was restored and the pump restarted within 46 seconds. There was a negligible increase in RHR suction temperature during the 46-second period to restart the required pump following sequencing of the EDGs.

After assessing the cause of the loss of offsite power and confirming that the redundant circuit for off site power remained available, offsite power was restored to the Unit 1 safeguards buses by synchronizing the running EDGs to the grid and closing the alternate feed from offsite power. Offsite power remained available to the affected unit (Unit 1) via this redundant path (2X03), as well as from the opposite unit's low voltage station auxiliary transformer (2X04 to 4160/480V buses to Unit 1) throughout the event.

At the time of the event, Unit 1 was in MODE 5 with the primary system intact, the pressurizer was water-solid, and reactor coolant system temperature and pressure were approximately 115°F and 75 psig, respectively. Residual heat removal, component cooling, and service water systems were in service providing decay heat removal, and the secondary side of the steam generators were available to provide decay heat removal if necessary. The loss of offsite power did not constitute a safety system functional failure.

**Cause of the Event:**

The specific cause of this event was the failure of all three phases of the 1F89-112, high side circuit switcher, to the 1X-03 high voltage station auxiliary transformer. This resulted in the degraded voltage condition to safeguards buses 1A05 and 1A06. Binding of the 1F89-112 circuit switcher "A" phase operating mechanism prevented proper resetting (closure) of the load contacts when the circuit switcher was opened. This condition subsequently resulted in failure of the circuit switcher when the next closure operation was performed. The root cause of the event was that the circuit switcher preventive maintenance (PM) program did not include manufacturer recommendations.

**Analysis of the Event**

The 13.8 kV system boundaries include the high voltage station auxiliary transformer (1/2X-03) up to the high side connection of the low voltage station auxiliary transformers (1/2X-04), and various 480 V transformers.



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## NARRATIVE

The 13.8 kV system supplies offsite power to the station via the 4.16 kV and 480 V systems. The 13.8 kV system is divided into three buses which are designated H-01, H-02 and H-03. The H-02 bus supplies Unit 1 and is normally served by high voltage station auxiliary transformer 1X-03. The H-02 bus supplies power to low voltage station auxiliary transformer 1X-04. Similarly, the H-03 bus supplies Unit 2 and is normally served by high voltage station auxiliary transformer 2X-03. The H-03 bus supplies power to the low voltage station auxiliary transformer 2X-04. The units can be interconnected to alternate supplies by arranging bus tie breakers to connect H-02 to H-01 and H-03 to H-01.

## Safety Analysis

The failure of the circuit switcher occurred during switchyard realignment and resulted in a low voltage condition which started the four standby emergency diesel generators. However, the fault (a high resistance connection) did not cause a lockout of 1X03, the associated switchyard component. As a result, the automatic transfer to close in the redundant offsite power supply in the switchyard was not initiated, and the G01 and G03 emergency diesel generators proceeded to automatically load to the Unit 1 safety system buses once they had reached operating voltage and frequency.

An assessment confirmed that the redundant circuit for offsite power remained available. Offsite power was restored to the Unit 1 safeguards buses by synchronizing the running EDGs to the grid and closing the alternate feed from offsite power. Offsite power remained available to the affected unit from this redundant path, as well as from the opposite unit's low voltage station auxiliary transformer throughout the event.

## Corrective Actions

Station procedures have been revised to check local circuit switcher indicators for proper configuration prior to and following operation. Additional corrective actions associated with the PMs are being tracked to completion in the station's corrective action program.

## Similar Events

None

## Component Failure Data

<u>Manufacturer</u>	<u>Description</u>	<u>Model Number</u>
S & C	Circuit Switcher	Type G, 3 Gap, Center-Break